

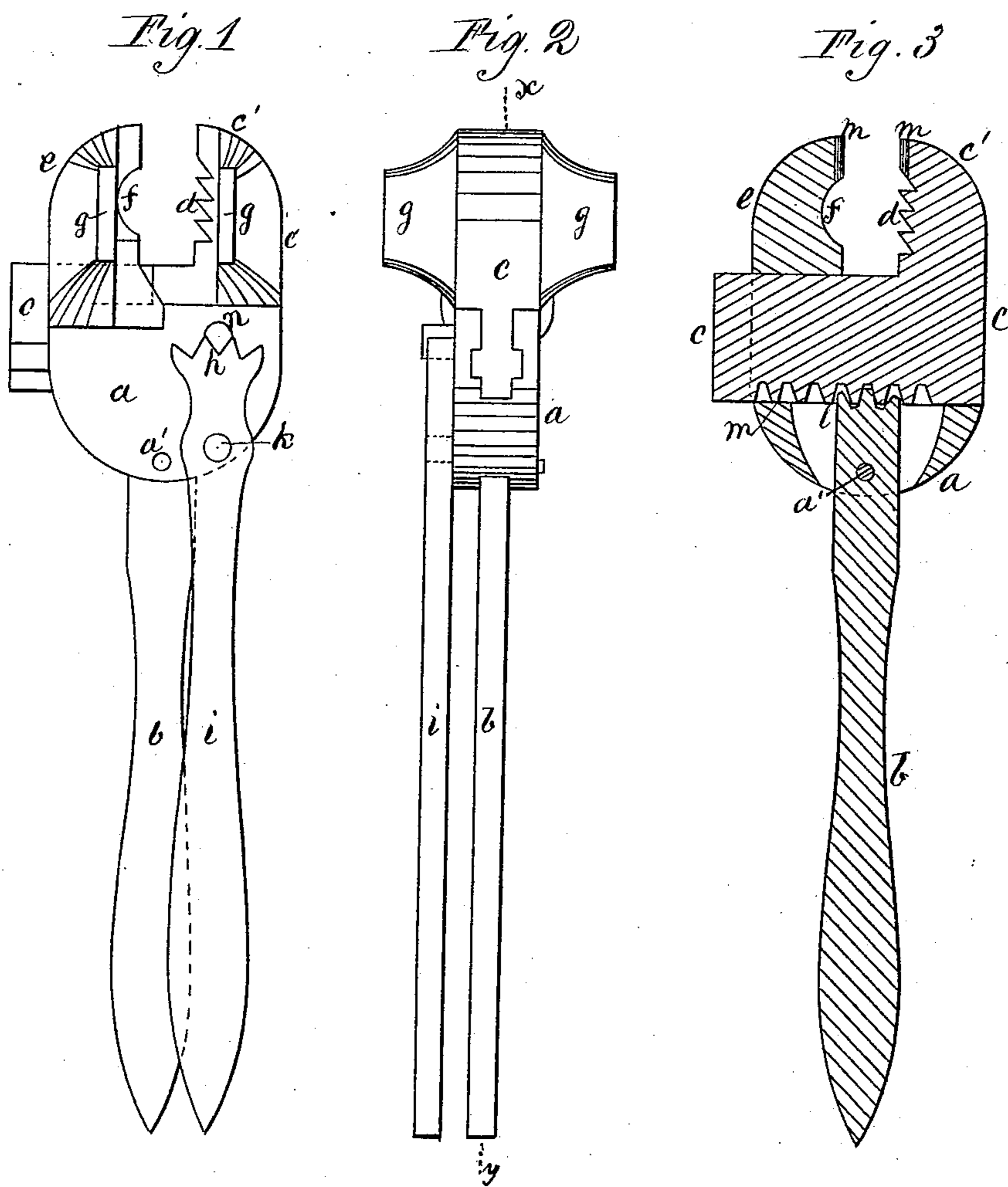
(No Model.)

D. R. PORTER.

COMBINED WRENCH, VISE, AND NAIL PULLER.

No. 266,310.

Patented Oct. 24, 1882.



Witnesses,  
In Maynoir  
John A. Carr.

Inventor,  
Dant R. Porter  
by J. H. Adams  
Att'y.

# UNITED STATES PATENT OFFICE.

DANIEL R. PORTER, OF CAMBRIDGEPORT, ASSIGNOR OF ONE-FOURTH TO  
STEPHEN F. KEYES, OF MELROSE, MASSACHUSETTS.

## COMBINED WRENCH, VISE, AND NAIL-PULLER.

SPECIFICATION forming part of Letters Patent No. 266,310, dated October 24, 1882.

Application filed March 19, 1880. (No model.)

*To all whom it may concern:*

Be it known that I, DANIEL R. PORTER, of Cambridgeport, in the county of Middlesex and State of Massachusetts, have invented a new and useful Improvement in Combined Wrench, Vise, and Nail-Puller, of which the following is a specification.

The object of my invention is to produce an implement which shall answer all the purposes of a wrench, and serving as a monkey and pipe wrench, an axle-nut wrench, a vise, and a nail-puller, all in one; and the invention consists of a movable jaw provided with teeth, the upper edges of each of which are at right angles with the face of said jaw, and a stationary jaw made concave on its face, and each jaw being provided with projections extending outwardly from each side, so as to render the implement capable of actuating a nut on the axle of a vehicle, in combination with a supplementary adjustable handle, to be used in connection with the wrench when the implement is required for a vise or to hold the jaws in a fixed position.

Referring to the drawings, Figure 1 represents a face view of my invention, with the jaws partially open. Fig. 2 is a side view of the same, and Fig. 3 is a vertical section on the line *xy* of Fig. 2.

*a* is the head, which is provided with a groove extending longitudinally through the same, in which is fitted to slide freely a block, *c*, forming a part of the movable jaw *c'*. The face of the movable jaw is provided with a series of teeth, *d*, the upper sides of which are at right angles with the face of the jaw, as shown in Fig. 3, for the purpose of insuring a firm grip when the implement is used for a pipe-wrench. *e* is the stationary jaw, forming a part of the head *a*, and having a concave face, *f*, as shown in Figs. 1 and 3, to accommodate a pipe on the opposite side from face *d* of the movable jaw.

At the center of the face of each jaw, on the upper side, is a vertical groove, *m*, or depression, for the purpose of holding firmly and in

a vertical position any article—such as a pipe or round bar—when the implement is used for a vise.

Extending outwardly on each side of each jaw *c'* are supplementary jaws *gg*, having plain front faces, which are designed for turning nuts on the ends of vehicle-axles within the hub of the wheel.

To the head *a* is pivoted, at *a'*, the handle or lever *b*, having on its upper end teeth *l*, which engage with teeth on the under side of the block *c*, to which the jaw *c'* is attached, or which it forms a part of, and by means of which the jaw *c'* is moved to and fro.

To the face of the head *a* is pivoted at *h* an adjustable supplementary handle or lever, *i*, capable of being readily attached and detached, as required for use. It is provided with teeth on its upper end, which engage with a stud or pin, *n*, on the face of the head *a*, so that by adjusting the teeth upon the stud the jaw *c'* may be firmly held in any required position, thus rendering the implement capable for service as a vise, the two handles *b* and *i* being grasped and held together by the hand.

I do not claim a sliding nut operated by a segmental handle, as I am aware that this is not new; but

What I claim as my invention, and desire to secure by Letters Patent, is—

A combined wrench, vise, and nail-puller consisting of the head *a*, provided with a longitudinal groove and attached to a handle, *b*, having teeth which engage with teeth on the movable block *c*, the jaws *c'* and *e*, the supplementary jaws *gg*, and the adjustable detachable lever or handle *i*, as and for the purpose set forth.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

DANIEL R. PORTER.

Witnesses:

JOS. H. ADAMS,  
S. F. KEYES.